

## Density Recap:

#12:

$$\cancel{V(D)} = \left( \frac{m}{\cancel{V}} \right) \cancel{V}$$

①

$$DV = m$$

$$D = 0.5 \text{ g/cm}^3$$

$$V = 800 \text{ cm}^3$$

$$m = ?$$

$$m = DV$$

$$= (0.5 \text{ g/cm}^3) (800 \text{ cm}^3)$$

$$= 400 \text{ g}$$

②

①

#13:

$$D = \frac{m}{V}$$

$V = 125 \text{ mL}$

$m = 80 \text{ g}$

$D = ?$

$$= \frac{80 \text{ g}}{125 \text{ mL}}$$
$$= 0.64 \text{ g/mL}$$

#14:

 $D = ?$ 

$$D = \frac{m}{V}$$

$$m = 60 \text{ g}$$

$$V = 2 \text{ cm}^3$$

$$= \frac{60 \text{ g}}{2 \text{ cm}^3}$$

$$= 30 \text{ g/cm}^3$$

#16:

$$\begin{aligned} V &= (l)(w)(h) \\ &= (2\text{ cm})(3\text{ cm})(4\text{ cm}) \\ &= 24\text{ cm}^3 \end{aligned}$$

$$D = ?$$

$$m = 48\text{ g}$$

$$\begin{aligned} D &= \frac{m}{V} \\ &= \frac{48\text{ g}}{24\text{ cm}^3} \\ &= 2\text{ g/cm}^3 \end{aligned}$$

#18:  $\cancel{V}(D) = \frac{m}{\cancel{V}}$

$\cancel{D}V = \frac{m}{\cancel{D}}$

$V = \frac{m}{D}$

$= \frac{120g}{0.6g/cm^3}$

$= 200 cm^3$

$D = 0.6 g/cm^3$

$M = 120g$

$V = ?$

#19:

$$m = ?$$

~~$$V(D) = \left(\frac{m}{V}\right)$$~~

$$V = 34 \text{ cm}^3$$

$$D = 6 \text{ g/cm}^3$$

$$DV = m$$

$$m = DV$$

$$= (6 \text{ g/cm}^3)(34 \text{ cm}^3)$$

$$= 204 \text{ g}$$

A block with mass of 60 g is submerged in water. The water level begins at 10 mL and rises to 20 mL when the object is submerged. What is the density of the object?

$$V = 20 \text{ mL} - 10 \text{ mL} = 10 \text{ mL}$$

$$m = 60 \text{ g}$$

$$D = ?$$

$$\begin{aligned} D &= \frac{m}{V} \\ &= \frac{60 \text{ g}}{10 \text{ mL}} \\ &= 6 \text{ g/mL} \end{aligned}$$